

METHOD AND APPARATUS FOR CONTROLLING THE BANDWIDTH FREQUENCY OF AN ANALOG FILTER

ABSTRACT

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An analog filter (10) having a bandwidth tracking circuit includes an analog filter element (14) and a digital tracking loop (22). The digital tracking loop (22) compares a magnitude difference to a predetermined threshold to generate an error signal. The magnitude difference is determined during a closed loop bandwidth calibration by subtracting a first magnitude of an analog input signal over a predetermined frequency range to a second magnitude of the analog input signal over the predetermined frequency range located near the bandwidth frequency. Use of the digital tracking loop (22) provides a digital approach for achieving bandwidth tracking of an analog filter without the need for achieving any manufacturing process matching between the analog filter and the tracking circuit itself. The analog filter element (14) may be either a lowpass, highpass, bandpass, active or passive filter element.